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Notice of Allowability	Application No.	Applicant(s)	
	10/768,307	HUANG ET AL.	
	Examiner	Art Unit	
	Roy K. Potter	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 14-20.
3. ☒ The drawings filed on 29 January 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/157,069.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

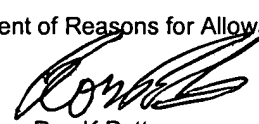
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none">1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____4. <input checked="" type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none">5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____7. <input type="checkbox"/> Examiner's Amendment/Comment8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance9. <input type="checkbox"/> Other _____ |
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Roy K Potter
Primary Examiner
Art Unit: 2822

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art does not teach the recited method for fabricating a semiconductor package, including the steps of bonding a downward extending portion of a heat spreader to the power plane of a chip in a way that the power connecting heat spreader covers entirely covers the chip and having a ground connected heat spreader that also entirely covers the chip.

Shim et al., U.s. Patent NO. 6,599,799, discloses a PBGA substrate for anchoring heat sinks. The substrate, as shown in Figure 2, has a front and back surface with a plurality of vias that extend between the surfaces. A chip 12 having an active and inactive surface with a plurality of pads is located on the substrate. A plurality of wires 28 electrically connect pads on the chip 12 to the vias. A heat spreader 10 is mounted over the front surface of the substrate. As described in column 4, line 6, the heat spreader can also establish a ground connection. Shim does not disclose that the heat spreader is connected to a power voltage or that it provides power voltage to a power plane of the chip. Also, there is no disclosure of both a ground connected heat spreader and a power connected heat spreader.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roy K. Potter whose telephone number is 571 272 1842. The examiner can normally be reached on M-F.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Roy K. Potter', with a stylized, cursive script.

Roy K Potter
Primary Examiner
Art Unit 2822